ABSTRACT

The invention provides a microfluidic valve comprising a first body for containing fluid having a fluid inlet and a fluid outlet and a plurality of electrodes, and arranged to contain, in use, a second body held within fluid contained in the first body, the second body being moveable toward or away from one of the fluid inlet or fluid outlet, the movement of the second body caused by the electric field generated by the electrodes, such that fluid flow into or out of the first body is controlled. The fluid flow is controlled using one of the dielectrophoretic, electrophoretic or electro-osmotic effects. The invention also provides a method of controlling fluid flow, and a microfluidic switch, and microfluidic chip and a diagnostic device, wherein fluid flow is controlled in each.